

What is claimed is:

1. A rotary belt sterilizer comprising:

a drive roller arranged to rotate in synchronization with running of a sterilized rotary belt;

5 an applicator roller for the sterilizing solution configured to apply a sterilizing solution to said sterilized rotary belt;

a switching device for the applicator roller arranged to contact said applicator roller with said sterilized
10 rotary belt during rotations of said drive roller and separate said applicator roller from said sterilized rotary belt during halts of said drive roller;

a supply tray for the sterilizing solution arranged to supply said sterilizing solution to said applicator
15 roller; and

a sterilizing solution supplier arranged to supply said sterilizing solution to said supply tray from a storage tank for the sterilizing solution per pre-determined rotations of said drive roller.

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2. The rotary belt sterilizer according to claim 1, wherein said drive roller, said applicator roller, said switching device, said supply tray and said sterilizing solution supplier are provided in a casing.

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3. The rotary belt sterilizer according to claim 1, wherein said drive roller is one of a pair of left and

right drive rollers normally contacted with said rotary belt.

4. The rotary belt sterilizer according to claim 1,
5 wherein said switching device includes:

a gear provided on a deceleration rotary shaft
arranged to rotate/halt in response to rotations/halts of
one of said drive rollers;

an eccentric gear arranged to detachably mate with
10 said gear;

a lifting rod for the applicator roller arranged to
lift said applicator roller up and down in response to
rotations/halts of said eccentric gear;

a flywheel arranged to rotate/halt in response to
15 rotations/halts of the other of said drive rollers; and

an engaging unit for the lifting rod arranged to
engage with/disengage from said lifting rod in response to
rotations/halts of said flywheel when said applicator
roller is lifted up.

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5. The rotary belt sterilizer according to claim 1,
wherein said engaging unit includes:

a weight movable toward the perimeter in response to
a centrifugal force caused by rotations of said flywheel;

25 an actuation pin arranged axially movable on the
axial center of a rotary shaft of said flywheel;

an axial movement converter mechanism configured to

move said actuation pin axially in response to movement of said weight toward the perimeter;

a vertical movement converter mechanism configured to convert axial movement of said actuation pin into vertical
5 movement; and

an engagement hook configured to complete preparation of engagement with said lifting rod when said vertical movement converter mechanism provides down pressure and disengage from said lifting rod when said vertical movement
10 converter mechanism releases pressure.

6. The rotary belt sterilizer according to claim 5, wherein said axial movement converter mechanism includes:

a pivotal lever having a lever end and configured to
15 pivot along the axis of said flywheel in response to movement of said weight toward the perimeter to press said lever end against an end of said actuation rod; and

a spring means configured to normally spring said actuation rod to release pressure applied on said
20 engagement hook.

7. The rotary belt sterilizer according to claim 1, wherein said sterilizing solution supplier includes:

a deceleration mechanism containing a worm provided
25 on said deceleration rotary shaft and a worm wheel having a flat cum mated with said worm;

a supply pump for the sterilizing solution being

actuated from a guide pin that impinges on said flat cum in said deceleration mechanism; and

a storage tank for the sterilizing solution arranged in communication with said supply pump.

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8. The rotary belt sterilizer according to claim 1, wherein said applicator roller contacts a supply roller for the sterilizing solution that is partly immersed into said sterilizing solution in said supply tray and arranged

10 rotatable therein.

9. The rotary belt sterilizer according to claim 8, wherein a throttle roller is provided with said supply roller.

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10. The rotary belt sterilizer according to claim 7, wherein said supply pump has an inlet and an outlet each provided with a unidirectional valve in a flow direction of said sterilizing solution.

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11. The rotary belt sterilizer according to claim 7, wherein said storage tank is detachably attached to said casing, and wherein said storage tank and said casing each have a unidirectional valve at an aperture thereof for
25 attachment to another, said unidirectional valve being opened on attachment and closed on detachment.